

**What is claimed is:**

1. A computer-implemented method of classifying demand data for at least one allocation term, comprising using a computer to perform the steps of:

5       inputting the demand data, order data of the allocation term, and supply data; and  
          classifying the demand data into prioritized demand data according to the order data and the supply data.

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2. The computer-implemented method of classifying demand data for at least one allocation term as claimed in claim 1, further comprising the steps of:

5       combining and outputting the prioritized demand data; and  
          updating the supply data according to the prioritized demand data.

3. The computer-implemented method of classifying demand data for at least one allocation term as claimed in claim 1, wherein the classification step further comprises the steps of:

5       designating a portion of the demand data, belonging to the order data, as first priority demand data;

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          designating a portion of the demand data, not belonging to the order data, as unfinished demand data and a portion of the supply data, not belonging to the order data, as unfinished supply data;

designating a portion of the unfinished demand  
data, belonging to the unfinished supply  
15 data, as second priority demand data; and  
designating a portion of the unfinished demand  
data, not belonging to the unfinished supply  
data, as third priority demand data.

4. The computer-implemented method of  
classifying demand data for at least one allocation  
term as claimed in claim 1, wherein the demand data  
has at least one demand amount, at least one demand  
5 factory, and at least one demand manufacturing  
technology, the demand factory and the demand  
manufacturing technology corresponding to the demand  
amount.

5. The computer-implemented method of  
classifying demand data for at least one allocation  
term as claimed in claim 1, wherein the order data has  
at least one order amount, at least one order factory,  
and at least one order manufacturing technology, the  
order factory and the order manufacturing technology  
5 corresponding to the order amount.

6. The computer-implemented method of  
classifying demand data for at least one allocation  
term as claimed in claim 1, wherein the supply data  
has at least one supply amount, at least one supply  
factory, at least one supply manufacturing technology,  
5 and at least one supply term, the supply factory, the

supply manufacturing technology, and the supply term corresponding to the supply amount.

7. The computer-implemented method of classifying demand data for at least one allocation term as claimed in claim 3, wherein the step of designating the first priority demand data further  
5 comprises the steps of:

comparing the order data with the demand data according to the same order amount and demand amount, the same order factory and demand factory, and the same order manufacturing technology and demand manufacturing technology;

comparing the order data with the demand data according to the same order amount and demand amount, the different order factory and demand factory, and the same order manufacturing technology and demand manufacturing technology; and

comparing the order data with the demand data according to the same order amount and demand amount, the same order factory and demand factory, and the different order manufacturing technology and demand manufacturing technology.

8. The computer-implemented method of classifying demand data for at least one allocation term as claimed in claim 3, wherein the step of designating the second priority demand data further  
5 comprises the steps of:

- comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;  
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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;  
15  
comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the different supply term and allocation term; and  
20  
comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term; and  
25  
comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term.  
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9. The computer-implemented method of  
35 classifying demand data for at least one allocation  
term as claimed in claim 3, wherein the step of  
designating the third priority demand data further  
comprises the steps of:

40 comparing the unfinished demand data with the  
unfinished supply data according to the same  
demand amount and supply amount, the same  
demand factory and supply factory, the same  
demand manufacturing technology and supply  
manufacturing technology, and the same  
45 supply term and allocation term;

50 comparing the unfinished demand data and the  
unfinished supply data according to the same  
demand amount and supply amount, the different  
demand factory and supply factory,  
the same demand manufacturing technology and  
supply manufacturing technology, and the same  
55 supply term and allocation term;

55 comparing the unfinished demand data and the  
unfinished supply data according to the same  
demand amount and supply amount, the same  
demand factory and supply factory, the same  
demand manufacturing technology and supply  
manufacturing technology, and the different  
supply term and allocation term; and

60 comparing the unfinished demand data and the  
unfinished supply data according to the same  
demand amount and supply amount, the same  
demand factory and supply factory, the different  
demand manufacturing technology  
and supply manufacturing technology, and the  
65 same supply term and allocation term.

10. A storage medium for storing a computer program providing a method of classifying demand data for an allocation term, the method comprising the steps of:

5       inputting the demand data, order data of the allocation term, and supply data; and classifying the demand data into prioritized demand data according to the order data and the supply data.

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11. The storage medium as claimed in claim 10, further comprising the steps of:

      combining and outputting the prioritized demand data; and

5       updating the supply data according to the prioritized demand data.

12. The storage medium as claimed in claim 10, wherein the classification step further comprises the steps of:

      designating a portion of the demand data,  
5           belonging to the order data, as first  
            priority demand data;

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      designating a portion of the demand data, not belonging to the order data, as unfinished demand data and a portion of the supply data, not belonging to the order data, as unfinished supply data;

      designating a portion of the unfinished demand data, belonging to the unfinished supply data, as second priority demand data; and

15 designating a portion of the unfinished demand data, not belonging to the unfinished supply data, as third priority demand data.

13. The storage medium as claimed in claim 10, wherein the demand data has at least one demand amount, at least one demand factory, and at least one demand manufacturing technology, the demand factory and the demand manufacturing technology corresponding to the demand amount.

14. The storage medium as claimed in claim 10, wherein the order data has at least one order amount, at least one order factory, and at least one order manufacturing technology, the order factory and the order manufacturing technology corresponding to the order amount.

15. The storage medium as claimed in claim 10, wherein the supply data has at least one supply amount, at least one supply factory, at least one supply manufacturing technology, and at least one supply term, the supply factory, the supply manufacturing technology, and the supply term corresponding to the supply amount.

16. The storage medium as claimed in claim 12, wherein the step of designating the first priority demand data further comprises the steps of:

comparing the order data with the demand data  
5 according to the same order amount and demand amount, the same order factory and demand factory, and the same order manufacturing technology and demand manufacturing technology;

10 comparing the order data with the demand data according to the same order amount and demand amount, the different order factory and demand factory, and the same order manufacturing technology and demand manufacturing technology; and

15 comparing the order data with the demand data according to the same order amount and demand amount, the same order factory and demand factory, and the different order manufacturing technology and demand manufacturing technology.

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17. The storage medium as claimed in claim 12, wherein the step of designating the second priority demand data further comprises the steps of:

comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the different supply term and allocation term; and

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term; and

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term.

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18. The storage medium as claimed in claim 12, wherein the step of designating the third priority demand data further comprises the steps of:

comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the different supply term and allocation term; and

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the different supply term and allocation term; and

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comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term.

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19. A system of classifying demand data for an allocation term, comprising:

a demand database, storing the demand data;

a supply database, storing supply data;

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a customer interface, enabling input of order data of the allocation term; and

a controller computer, paired to the demand database, the supply database, and the customer interface, classifying the demand data into prioritized demand data according to the order data and the supply data.

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20. The system of classifying demand data for an  
allocation term as claimed in claim 19, wherein the  
15 controller computer further combines and outputs the  
prioritized demand data and the controller computer  
further updates the supply data according to the  
prioritized demand data.

20       21. The system of classifying demand data for an  
allocation term as claimed in claim 19, wherein the  
controller computer further designates a portion of  
the demand data belonging to the order data as first  
priority demand data, designates a portion of the  
25 demand data, not belonging to the order data, as  
unfinished demand data and a portion of the supply  
data, not belonging to the order data, as unfinished  
supply data, and further designates a portion of the  
unfinished demand data, belonging to the unfinished  
30 supply data, as second priority demand data, and a  
portion of the unfinished demand data, not belonging  
to the unfinished supply data, as third priority  
demand data.

22. The system of classifying demand data for an  
allocation term as claimed in claim 19, wherein the  
demand data has at least one demand amount, at least  
one demand factory, and at least one demand  
5 manufacturing technology, the demand factory and the  
demand manufacturing technology corresponding to the  
demand amount.

23. The system of classifying demand data for an allocation term as claimed in claim 19, wherein the order data has at least one order amount, at least one order factory, and at least one order manufacturing technology, the order factory and the order manufacturing technology corresponding to the order amount.

24. The system of classifying demand data for an allocation term as claimed in claim 19, wherein the supply data has at least one supply amount, at least one supply factory, at least one supply manufacturing technology, and at least one supply term, the supply factory, the supply manufacturing technology, and the supply term corresponding to the supply amount.

25. The system of classifying demand data for an allocation term as claimed in claim 21, wherein the controller computer further compares the order data with the demand data according to the same order amount and demand amount, the same order factory and demand factory, and the same order manufacturing technology and demand manufacturing technology, further compares the order data with the demand data according to the same order amount and demand amount, the different order factory and demand factory, and the same order manufacturing technology and demand manufacturing technology, and even further compares the order data with the demand data according to the same order amount and demand amount, the same order factory and demand factory, and the different order

manufacturing technology and demand manufacturing technology.

26. The system of classifying demand data for an allocation term as claimed in claim 21, wherein the controller computer further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term, further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term, further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term, and even further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the different supply term and allocation term, and finally compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term.

27. The system of classifying demand data for an allocation term as claimed in claim 21, wherein the controller computer further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term, further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term, further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term, and further compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the different supply term and allocation term, and finally compares the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term.

28. A system of demand and capacity management, comprising:

an allocation planning module to receive demand data for one allocation term, order data of  
5 the allocation term, and supply data;

a capacity model having route information for the product, wherein the route information records a plurality of tools; and

a capacity management module to reserve capacity  
10 according to the demand data and the route information.

29. The system as claimed in claim 28, wherein the allocation planning module further comprises:

a data input module, inputting the demand data, order data of the allocation term, and  
5 supply data; and

a classifying module, classifying the demand data into prioritized demand data according to the order data and the supply data.

30. The system as claimed in claim 29, wherein the allocation module further comprises:

a combining module, combining and outputting the prioritized demand data; and

5 a updating module, updating the supply data according to prioritized demand data.

31. The system as claimed in claim 29, wherein  
the classifying module further comprises:

5           a first priority designating module, designating  
              a portion of the demand data, belonging to  
              the order data, as first priority demand  
              data

10          an unfinished data designating module,  
              designating a portion of the demand data,  
              not belonging to the order data, as  
              unfinished demand data and designating a  
              portion of the supply data, not belonging to  
              the order data, as unfinished supply data;

15          a second priority designating module, designating  
              a portion of the unfinished demand data,  
              belonging to the unfinished supply data, as  
              second priority demand data; and

20          a third priority designating module, designating  
              a portion of the unfinished demand data, not  
              belonging to the unfinished supply data, as  
              third priority demand data.

32. The system as claimed in claim 28, wherein  
the demand data has at least one demand amount, at  
least one demand factory, and at least one demand  
manufacturing technology, the demand factory and the  
5          demand manufacturing technology corresponding to the  
              demand amount.

33. The system as claimed in claim 28, wherein  
the order data has at least one order amount, at least  
one order factory, and at least one order  
manufacturing technology, the order factory and the  
order manufacturing technology corresponding to the  
order amount.

34. The system as claimed in claim 28, wherein  
the supply data has at least one supply amount, at  
least one supply factory, at least one supply  
manufacturing technology, and at least one supply  
term, the supply factory, the supply manufacturing  
technology, and the supply term corresponding to the  
supply amount.

35. The system as claimed in claim 31, wherein  
the first priority designating module further  
comprises:

a first-first comparing module, comparing the  
order data with the demand data according to  
the same order amount and demand amount, the  
same order factory and demand factory, and  
the same order manufacturing technology and  
demand manufacturing technology;

a second-first comparing module, comparing the  
order data with the demand data according to  
the same order amount and demand amount, the  
different order factory and demand factory,  
and the same order manufacturing technology  
and demand manufacturing technology; and

20           a third-first comparing module, comparing the order data with the demand data according to the same order amount and demand amount, the same order factory and demand factory, and the different order manufacturing technology and demand manufacturing technology.

36. The system as claimed in claim 31, wherein the second priority designating module further comprises:

- 5           a first-second comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;
- 10          a second-second comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;
- 15          a third-second comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply
- 20          a third-second comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply
- 25          a third-second comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply

manufacturing technology, and the different supply term and allocation term; and  
a fourth-second comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the different demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term.

37. The system as claimed in claim 31, wherein the third priority designating module further comprises:

a first-third comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the same demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

a second-third comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand amount and supply amount, the different demand factory and supply factory, the same demand manufacturing technology and supply manufacturing technology, and the same supply term and allocation term;

a third-third comparing module, comparing the unfinished demand data with the unfinished supply data according to the same demand

amount and supply amount, the same demand  
factory and supply factory, the same demand  
25 manufacturing technology and supply  
manufacturing technology, and the different  
supply term and allocation term; and  
a fourth-third comparing module, comparing the  
unfinished demand data with the unfinished  
30 supply data according to the same demand  
amount and supply amount, the same demand  
factory and supply factory, the different  
demand manufacturing technology and supply  
manufacturing technology, and the same  
35 supply term and allocation term.

38. The computer-implemented method as claimed  
in claim 1, wherein the allocation term is one month.

39. The computer-implemented method as claimed  
in claim 1, wherein the method classifies the demand  
data for a plurality of allocation terms.

40. The storage medium as claimed in claim 10,  
wherein the computer program provides a method of  
classifying data for a plurality of allocation terms.

41. The system as claimed in claim 31, wherein  
the allocation term is one month.